This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. ***(currently amended)*** A method of separating components of a fluid mixture, comprising the steps of:

providing a fluid mixture comprising a first component and a second component;

providing a sorbent structure comprising at least one sorbent;

sorbing said first component onto **or into** said sorbent;

desorbing said first component; and

electrokinetically biasing said first component in a direction other than the vector of said fluid mixture.

Claims 2-9 ***(canceled)***

10. ***(original)*** A method according to claim 1, further comprising the step of:

collecting an exhaust fluid stream enriched in said second component and depleted in said first component.

11. ***(currently amended)*** A method according to claim 1, further comprising the step of:

collecting **[[a]]** heat of sorption generated by said ~~**adsorbing**~~ **sorbing** step.

Claims 12-15 ***(canceled)***

16. ***(currently amended)*** A method according to claim 1, further comprising the step of:

generating a plasma.

Claims 17-131 ***(canceled)***

132. ***(currently amended)*** A method of producing at least one reaction product, comprising the steps of:

providing a fluid mixture comprising a first component;

providing **a** sorbent structure comprising at least one sorbent and at least one catalyst;

~~**adsorbing**~~ **sorbing** said first component onto **or into** said ~~**absorbent**~~ **sorbent**;

catalyzing a reaction of said ~~**absorbed**~~ **sorbed** first component to form at least one ~~**adsorbed**~~ **sorbed** reaction product;

desorbing said ~~**adsorbed**~~ **sorbed** reaction product; and

electrokinetically biasing said desorbed reaction product in a direction other than the vector of said fluid mixture.

Claims 133-153 ***(canceled)***

154. ***(currently amended)*** A method of analyzing the components of a fluid mixture, comprising the steps of:

providing a fluid mixture comprising a first component and a second component;

providing **[[a]]** **at least one** sorbent structure comprising at least one sorbent;

sorbing said first component onto **or into** said sorbent;

desorbing said first component;

electrokinetically biasing said first component in a direction other than the vector of said fluid mixture; and

analyzing said desorbed first component.

155. ***(currently amended)*** A method of analyzing the components of a fluid mixture, comprising the steps of:

providing a fluid mixture comprising a first component and a second component;

providing **[[a]]** **at least one** sorbent structure comprising at least one sorbent;

sorbing said first component onto **or into** said sorbent;

desorbing said first component;

electrokinetically biasing said first component in a direction other than the vector of said fluid mixture;

collecting an exhaust fluid stream enriched in said second component and depleted in said first component; and

analyzing said exhaust fluid stream.

Claims 156-160 ***(canceled)***

161. ***(currently amended)*** A method of controlling temperature, comprising the steps of:

providing a fluid comprising a first component;

providing a sorbent structure comprising at least one sorbent in a container;

sorbing said first component onto **or into** said sorbent;

desorbing said first component;

electrokinetically biasing said first component and moving said first component in a direction other than the vector of said fluid;

condensing said first component;

evaporating said condensed first component; and

~~**re-adsorbing**~~ **re-sorbing** said evaporated first component onto **or into** said sorbent.

162. ***(canceled)***

163. ***(canceled)***

164. ***(currently amended)*** A method of controlling temperature according to claim 161, further comprising the step of:

applying an electromotive force to said condensed first component.

165. ***(original)*** A sorption device, comprising:

a sorbent structure comprising at least one sorbent;

an electrokinetic biaser; and

a desorber.

Claims 166-178 ***(canceled)***

179. ***(currently amended)*** A sorption device according to claim 165, further comprising:

a source of a fluid mixture comprising at least a first component**, and optionally a second component**.

180. ***(canceled)***

181. ***(currently amended)*** A sorption device according to claim 179 ~~**or claim 180**~~, further comprising:

a collector of said first component.

182. ***(original)*** A sorption device according to claim 181, further comprising:

a collector of an exhaust fluid stream enriched in said second component and depleted in said first component.

183. ***(currently amended)*** A ~~**sorption device**~~ **method** according to claim ~~**181**~~ **132**, further comprising~~**: a collector**~~ **the step** of**:**

collecting said reaction product ~~**component.**~~

184. ***(previously presented)*** A sorption device according to claim 165, further comprising:

a collector of an exhaust fluid stream depleted in said first component

185. ***(canceled)***

186. ***(previously presented)*** A sorption device according to claim 165, further comprising:

a heat exchange medium.

187. ***(canceled)***

188. ***(canceled)***

189. ***(original)*** A sorption device according to claim 186, further comprising:

a source to apply an electrohydrodynamic force to said heat exchange medium to increase liquid-to-liquid contact.

190. ***(canceled)***

191. ***(previously presented)*** A sorption device according to claim 165, further comprising:

at least one electrohydrodynamic pump.

Claims 192-195 ***(canceled)***

196. ***(previously presented)*** A sorption device according to claim 165, further comprising:

one or more channels through which said fluid mixture flows.

Claims 197-213 ***(canceled)***

214. ***(previously presented)*** A sorption device according to claim 165,

wherein said sorbent structure further comprises at least one high aspect ratio conductor.

Claims 215-224 ***(canceled)***

225. ***(previously presented)*** A sorption device according to claim 165, further comprising:
at least one piezoelectric valve or pump.

Claims 226-245 ***(canceled)***

246. ***(previously presented)*** A sorption device according to claim 165, further comprising:
at least one power conditioning device.

247. ***(canceled)***

248. ***(canceled)***

249. ***(previously presented)*** A sorption device according to claim 165, further comprising:
at least one thermoelectric module.

250. ***(currently amended)*** A system, comprising:
at least one ~~**adsorption**~~ **sorption** device according to claim 165.

Claims 251-257 ***(canceled)***

258. ***(original)*** A system according to claim 250, further comprising:
at least one analytical device.

Claims 259-268 ***(canceled)***

269. ***(currently amended)*** An inanimate organ for carrying out a bodily function in a patient in need thereof, comprising:

the sorption device according to claim 165;

wherein said bodily function is selected from the group consisting of:

removing toxins from blood;

removing toxins from respired air;

and combinations thereof[[;]]**.**

Claims 270-337 ***(canceled)***

338. ***(currently amended)*** ~~**An adsorption**~~ **A sorption** device, comprising:

a first substrate layer;

an sorbent layer disposed adjacent to said first substrate layer;

at least two electrodes in contact with or in close proximity to at least one of said first substrate layer and said sorbent layer;

a second substrate layer disposed adjacent to said sorbent layer,

at least one via disposed through at least one of said first substrate layer, said sorbent layer, and said second substrate layer; said at least one via being disposed between said at least two electrodes; **and**

at least one collection port disposed through at least one of said first substrate layer, said sorbent layer, and said second substrate layer.

339. ***(canceled)***

340. ***(original)*** A sorption device according to claim 338, further comprising:

at least one non-sorbent microstructure material within said sorbent layer.

341. ***(currently amended)*** A sorption device according to claim 338, further comprising:

at least one manifold wherein said manifold performs at least one function of removing ~~**an adsorbed**~~ **a sorbed** component, providing a feed stream, directing materials toward said sorption unit and directing material away from said sorption unit.

342. ***(original)*** A sorption device according to claim 338, further comprising:

at least one of a coupled power source and a coupled multiphase signal generator.

Claims 343-374 ***(canceled)***

375. ***(original)*** A sorption device, comprising:

a first substrate layer;

an sorbent layer disposed below the first substrate layer; at least two electrodes in contact with or in close proximity to at least one of said first substrate layer and said sorbent layer;

a second substrate layer disposed below said sorbent layer,

at least one via disposed through at least one of said first substrate layer, said sorbent layer and said second substrate layer, said at least one via being disposed between said at least two electrodes;

at least one collection port disposed through at least one of said first substrate layer, said sorbent layer and said second substrate layer;

a third substrate layer disposed over at least one of said first substrate layer and said sorbent layer; and

a working fluid;

wherein said first substrate layer, said sorbent layer and said second substrate layer are co-planar; and

wherein placement of said third substrate layer above said first substrate layer defines a chamber; and

wherein said working fluid is recycled within said sorption cell.

376. ***(original)*** A sorption device according to claim 375, further comprising:

at least one non-sorbent microstructure material within said sorbent layer.

377. ***(currently amended)*** A sorption device according to claim 375, further comprising:

at least one manifold mechanism wherein said manifold mechanism performs at least one function of removing ~~**an adsorbed**~~ **a sorbed** material, providing a feed stream, directing materials toward said sorption unit and directing material away from said sorption unit.

Claims 378-401 ***(canceled)***

402. ***(original)*** A sorption device according to claim 375, further comprising:

at least one power conditioning device.

403. ***(new)*** A system according to claim 250,

wherein said system is selected from the group consisting of a vacuum pump, a foundry cold box, a dehydration device, a deodorizing device, an oxygen purifying device, a cooling device, a heating device, a refrigeration device, a heat pump device, a computer processing unit, a vehicle, a device for purifying air in the internal environment of a vehicle, a device for purifying water in the internal environment of a vehicle, a fuel reformer, a fuel purification device, a combustion device, a fuel cell, a device for purifying exhaust of a vehicle, a device for pollution abatement, a device for temperature conditioning spaces for human habitation, a device for temperature conditioning spaces for animal habitation, a device for temperature conditioning spaces for food storage, a concentrator for an analytical device, an analytical device, an oxygen source for coal conversion, an oxygen source for a power generation system, an oxygen source for a residential or institutional furnace, an oxygen source for a fuel cell, a cryo-cooling device, a temperature conditioning device, and a thermal management device for a laser.